

CTE's Role in Worker

RETRAINING



IN THIS BRIEF:

This Issue Brief will explore the essential role that career and technical education programs play in addressing many of the issues faced by unemployed and underemployed workers. These programs target the adult learner through short-term and accelerated courses; utilize flexible learning approaches to account for students' other responsibilities; include wrap-around support services to increase student success; and concentrate on high-demand career areas to ensure students are prepared for jobs that exist in local economies.

High unemployment rates and an evolving labor market have created a strong need for efficient and effective worker retraining programs. Too often, workers' skills are underdeveloped or outdated, leading to prolonged underemployment or preventing re-employment after job loss.¹ Unemployed and underemployed workers must develop new skills or update current skills to reflect workplace changes in order to secure employment in the careers that are available in today's economy.

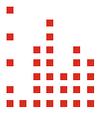
Career and technical education (CTE) programs, such as those at community and technical colleges and area CTE centers, are leading efforts to provide these individuals the training they need in a format conducive to their lives. Programs providing critical worker retraining not only focus on local employment needs, but also consider the individual needs of this adult population.

The Concerns

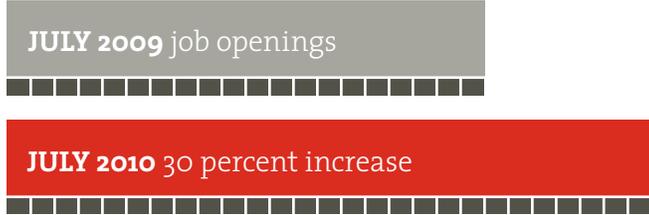
ECONOMIC CONDITIONS

Unemployment rates have skyrocketed as a result of U.S. economic conditions, exacerbated by the loss of jobs to globalization and increased use of technology to produce goods that were previously produced manually. Recent numbers are bleak, with the Bureau of Labor Statistics reporting that nearly twice as many workers were displaced between January 2007 and December 2009 as in the previous two-year period, and fewer of these displaced workers have been able to secure new employment.² For example, in November 2010, almost 42 percent of the unemployed had been out of work for 27 weeks or longer.³

In addition to unemployed workers, there are many workers who are employed in positions paying



The number of job openings increased nationally by 30 percent between July 2009 and July 2010.



low wages with no opportunity for advancement because they have limited or outdated skills. These workers include the “working poor,” who work at least 27 hours a week but whose income still falls below the poverty line. The number of working poor increased from 7.5 million to 8.9 million workers between 2007 and 2008, and is continuing to increase.⁴ Many other workers, some with much higher skill levels, have been forced to only work part-time, or to take jobs that do not relate to their prior education, skills or work experience. These workers generally face lost hours of work, decreased wages and reduced weekly earnings.⁵ The average monthly number of workers identified as underemployed more than doubled between 2007 and 2009 from about 4.4 million to about 8.9 million, and the underemployment rate jumped from only 2 percent of employed workers in 2007 to over 6 percent in 2009.⁶

JOB-SKILLS MISMATCH

With record high unemployment rates, it may seem logical to assume that there are no jobs available. On the contrary, there are still many employment opportunities in the job market for workers with the right skill set. The current long-term unemployment trend stems from a widespread mismatch between unemployed workers’ skills and the current needs of employers. Unemployed and underemployed workers generally do not have the skills or knowledge to find competitive, full-time employment paying family-sustaining wages and offering opportunities for advancement.

While some industries are downsizing, many others are actually expanding. In fact, the number of job openings nationally increased by 30 percent between July 2009 and July 2010.⁷ These employment opportunities, however, usually

require knowledge and skills that unemployed workers either don’t possess or have not developed because they were not needed in their previous positions. There is also a mismatch between the skills of many individuals in low-wage jobs and the skills required for these new employment opportunities, making it difficult for underemployed workers to advance.

Many of the jobs that are now available require some type of education or training beyond high school. This is a trend that is expected to continue, as it is projected that by 2018, 63 percent of all jobs will require some form of postsecondary education—a total that will significantly outnumber the population pursuing and completing these forms of preparation.⁸ The majority of the employment opportunities facing worker shortages will require on-the-job training, certificates or associate degrees. For example, health care positions are projected to continue to grow, but employees must often complete a certificate or specialized degree to be qualified for a position. The more training completed and stronger skill set held, the more likely an individual is to continue to advance within a career pathway.⁹

In addition, for unemployed workers or those looking to advance from low-wage positions—even those who previously completed some form of postsecondary training—the skills and knowledge acquired and implemented earlier in a career are likely to be considered outdated for the current, quickly changing workplace. These individuals need the opportunity to gain employability and technical skills as well as credentials that may be necessary to make them marketable to current employers.

The need for workers to update skills will be a continual challenge to business leaders, educators, the government and job training programs into the future. Regardless of the state of the economy, jobs will continue to change and workers must respond to these changes as their skills become outdated.¹⁰ Development of relevant skills throughout an employee’s career has the potential to prevent displacement resulting from a lack of necessary skill attainment. Acquiring up-to-date skills also helps to ensure marketability to other employment opportunities in the event that an organization downsizes or phases out particular jobs for any reason.

CTE Provides Solutions

The current economic situation and growing jobs-skills mismatch have dramatically increased the importance

of programs and opportunities to retrain workers for the demands of the current workplace. New training programs have been developed throughout the country, and have become increasingly popular with those in need of updated skills.

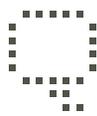
The CTE system has played a large role in the development of these programs, and CTE educators are leading efforts to ensure that new and redesigned programs are relevant and accessible to those most in need of additional education and training. CTE programs offer workers in a wide variety of different situations the opportunity to update current skills, develop new skills and knowledge, and obtain the necessary industry certification, certificate or degree for desired employment.

Programs focused on worker retraining are often offered through local community and technical colleges and area CTE centers, and these institutions are experiencing significant growth as more individuals seek out training opportunities. For example, community colleges around the country reported approximately 17 percent enrollment growth from 2007 to 2009, with numbers still rising.¹¹

These new students often have diverse needs, many which cannot be met by traditional education programs. Specifically designed CTE worker retraining programs can help address many of the issues faced by unemployed and underemployed workers. These programs target the adult learner through short-term and accelerated programs to decrease the time required for completion; utilize flexible learning approaches to account for students' other responsibilities; include wrap-around support services and programs targeted to specific populations to increase student success; and concentrate education and skills training in high-demand career areas to ensure students are prepared for jobs that exist in local economies.

OFFERING SHORT-TERM AND ACCELERATED PROGRAMS

One of the biggest advances in CTE worker retraining programs has been the development of short-term and accelerated programs designed to return individuals to the workforce quickly. These programs provide people an opportunity to upgrade and develop skills in a fast-paced, rigorous educational environment. Such options are appealing to individuals who are unable to invest the time or money needed for full-time, traditional postsecondary programs, which often take up to two years to complete. Programs have become so increasingly popular that many schools are overwhelmed with applicants.



CTE programs offer workers in a wide variety of different situations the opportunity to update current skills, develop new skills and knowledge, and obtain the necessary industry certification, certificate or degree for desired employment.

These short-term opportunities can result in certificates, diplomas or associate degrees, increasing the marketability of those workers involved. Workers also have the option of taking non-credit continuing education classes, which do not result in a certificate or degree but do update the employees' skills and knowledge within a certain field, helping to improve job security, opportunities for advancement or qualification for new positions. These training programs are generally focused on high-demand career areas, based on local needs and aimed at updating worker skills and knowledge in a specific career field. Many of the programs also include basic education skills, such as computer skills and general education knowledge.¹²

For example, in Missouri, St. Louis Community College¹³ offers accelerated job training to local workers in areas that have been identified as high demand. Students can choose from a variety of programs that range in time requirements from 40 hours for a Home Energy and Auditor Training program to 10 weeks for the Aerospace Pre-Employment Training Project. Programs result in certification in the specific field, qualifying workers for high-demand career areas within the state.

In Ohio, a partnership between Great Oaks Institute of Technology and Career Development, Cincinnati State Technical and Community College, Cincinnati Children's Hospital Medical Center, The Health Alliance of Greater Cincinnati and other community organizations has developed short-term customized training programs at its Health Professional Academy,¹⁴ leading students to entry-level jobs in the health care field. Programs, which students attend full-time, include Patient Care Assistant (one week), State Tested Nursing Assistant (two weeks), and State Tested Nursing Assistant/Patient Care Assistant and Health Unit Coordinator (five weeks). These programs then articulate to more advanced programs leading to associate degrees. The high level of industry involvement results in numerous placement opportunities for students.

In southeast Missouri, another partnership between Cape Girardeau Area Magnet, the Cape Girardeau Career and Technology Center, Carpenter’s District Council, Mineral Area College and the SEMO Regional Industrial Training Group, a consortium of 20 area industries, has established an Industrial Pre-Employment Skills Training Program to help get laid-off individuals back to work.¹⁵ This five-week, 200-hour program provides training in technical and computer skills, allows students to complete an OSHA certification in industrial safety and study quality control, and provides team-building and problem-solving experiences.

UTILIZING FLEXIBLE LEARNING APPROACHES

Underemployed workers or workers looking to update or learn new skills often struggle to fulfill the time requirements of school due to other responsibilities and commitments. In

addition to packaging programs in an accelerated format, many other flexible options have been developed to help students manage program requirements, including evening or online courses and other alternative schedules.

At Madisonville Community College¹⁶ in Kentucky, students’ individual skills are assessed and then customized training is offered to fit both the needs and the schedule of the student. Training sessions are offered in the evening and on weekends, and basic self-paced learning programs are accessible online. Self-study books, multimedia materials and videos provide students with the tools to advance skills independently. The school also offers adult students free GED preparation, one-on-one literacy instruction, basic computer applications courses, skill assessment, placement testing and remediation, and career planning and resume writing.



In Wisconsin, Gateway Technical College helps employers, employees and the community adapt to the changing labor market. The ultimate goal of the college is to “collaborate to ensure economic growth and viability by providing education, training, leadership, and technological resources to meet the changing needs of students, employers, and communities.”¹⁷

Through partnerships with local technology centers, businesses and the creation of a workforce development division, Gateway has developed strong links between the programs offered and the economic needs of the local community. This collaboration allows Gateway to develop customized training programs to provide unemployed and underemployed workers the skills necessary to obtain relevant, full-time employment in the local workforce.

Students looking for accelerated training opportunities can enroll in one of the many boot camps offered by the college to quickly develop the skills necessary for current job openings. Boot camps are offered through the college in the areas of computer numerical control (CNC), machine repair and welding. The programs are ideal for unemployed or underemployed workers, and require no prior experience in the industry sector, although students must complete a basic skills assessment prior to enrollment.

The CNC Boot Camp runs for 14 weeks and the Machine Repair Boot Camp runs 19 weeks. Both are five days a week for eight hours per day. The Welding Boot Camp requires 14 weeks of class, with 20 hours invested per week. Upon satisfactory completion of a boot camp, certifications are awarded and students earn college credit toward a degree. The local workforce development center is also working with local employers to hire graduates of the program.

Underemployed workers can also participate in short-term, non-credit professional development opportunities to update skills and complete necessary certifications to become more relevant in a specific industry. Professional development workshops are open to anyone interested, and are designed to improve capabilities through job-related training and professional growth opportunities. The workshops range from a single, six-hour program to 10-week programs, dependent on the area and complexity of development needs. Necessary continuing education opportunities for workers in high-demand areas are offered through workshops that cover a variety of topics, including computer software, leadership and specific technical skills. For example, torque training certification is offered to meet the needs of the growing global wind industry.

Other postsecondary institutions are taking evening course offerings a step further by offering “midnight” classes for students who work alternative schedules or have other daytime responsibilities. For example, Clackamas Community College in Oregon offers midnight welding courses, while Bunker Hill Community College in Boston, Anne Arundel Community College in Maryland and the College of Southern Nevada in Las Vegas offer a number of over-subscribed introductory courses in areas like algebra and biology, gateways to many high-demand career areas, such as health care.¹⁸

There are also opportunities for unemployed workers to receive occupational training through many online programs. One example, at Central New Mexico Community College,¹⁹ offers workers access to on-site courses based on local employer needs, and also online courses in a number of high-demand areas. Online courses generally last for about six weeks and provide workers more flexibility around when learning occurs. At Francis Tuttle Technology Center²⁰ in Oklahoma, the Business/Information Technology program also offers online sections. Students in Accounting, Administrative Office, Human Resources and Web Design and Development can move back and forth from on-campus to online depending on their employment situation. This arrangement allows students to continue upgrading their skills even once they are employed again, which highlights the value of lifelong learning in today’s economic environment.

OFFERING SPECIFIC SUPPORT SERVICES

The population of unemployed and underemployed workers includes many individuals with particular needs, and CTE programs often offer wrap-around support services or tailored programs to meet these needs. For example, these services and programs might provide additional support to those who speak English as a second language, displaced homemakers or underemployed full-time workers. These programs tailor the education and training to the specific background and individual needs of the learners in order to help these students obtain higher levels of success. Experts suggest that “intentionally integrating student support into coursework circumvents many of the barriers that keep students from these services” and ultimately leads to higher achievement.²¹

English language learners are prominent in today’s society and make up a large proportion of the current and future workforce. Programs such as the English as a Second Language (ESL) Vocational Career Pathway offered at Portland Community College provide these students with the opportunity to develop



Washington state has worked to create a connection between local or state workforce needs and the community and technical

colleges within the state. The State Board for Community and Technical Colleges has developed a state worker retraining program, through which unemployed workers are provided funding to partake in approved services at community and technical colleges. This program encourages colleges to design programs specifically aligned with economic needs through collaboration with an informed advisory committee.²² Colleges must develop a plan for worker retraining based on local needs in order to receive spending authority. Local needs are outlined by the Washington State Employment Security Department²³ and identified through work with the local advisory committee.

The general Worker Retraining Advisory Committee must consist of business and labor participants as well as representatives from agencies and community groups such as the Employment Security Department, workforce development councils and economic development organizations. The completed “Worker Retraining” plan must describe the colleges’ goals for the year for all programs. Priority is given to programs that address regional economic development plans and strategies. Throughout the state, there are now close to 40 colleges offering worker retraining that receive state funding.²⁴

Unemployed workers who would like to take part in an approved training course in a high-demand area are then eligible to apply for training benefits from the state. Training benefits provide additional unemployment benefits to workers enrolled in training for specific areas deemed in demand. For the state of Washington, workers can identify high-demand employment areas by region through the workforce development area qualifying occupations.

Big Bend Community College is one of the institutions participating in the program. Participants there receive career counseling while enrolled in short-term certificate programs in any number of one- or two-year occupational areas—ranging from business medical services to welding. Students in the worker retraining programs benefit from a short-term program focused on occupational skills in high-need areas.

the skills and knowledge for a specific profession while also learning to master the English language. English language learners who are unemployed or are underemployed can take advantage of programs such as ESL Healthcare, ESL Food Service and ESL Office Skills at the college.²⁵

Programs focused on displaced homemakers (those who have not worked outside of the home in the last three years and are not supported by a spouse or currently employed) often offer funding and training to develop current workforce skills. At Westchester Community College²⁶ in New York, Project Transition provides retraining for displaced homemakers to gain marketable skills. The program runs for six weeks and provides students with computer software training, career-decision counseling, skills assessment, work-readiness coaching, confidence building, and job search and placement.

The special needs of older workers have also been addressed by many career training programs, and these programs are likely to become even more important as the National Center for Education Statistics projects a 19 percent increase in college enrollment of students over the age of 25 between 2006 and 2017.²⁷ At Joliet Junior College²⁸ in Illinois, a Plus 50 Workforce Center was established to provide programs specifically geared to the aging learner faced with choosing a second career. Programs, workshops, mentoring and a comprehensive resource area all support the needs of the older job seeker as they obtain training.

At the Lorain County JVS Adult Career Center²⁹ in Ohio, the special needs of an adult student base have been addressed through a variety of wrap-around support services. These services address remediation, distance and evening learning, child care, transportation and job placement. Specifically,



Tennessee Technology Centers³⁰ provide technical education and training to students to meet the needs of employers in the community while taking adult learners' needs into consideration. Twenty-seven area CTE centers serve both high school students (through special agreements with local districts) and adults throughout the state of Tennessee. Most programs offered through the centers provide individualized instruction, allowing workers to develop the technical skills and professional training necessary for their individual needs and advancement. Students are able to enter a program whenever a vacancy occurs and can progress at their own rate to the level desired. Technical skills, as well as employability characteristics, are emphasized to develop character, good work habits, reliability, honesty and respect for authority.

Students at the Tennessee Technology Centers are provided with the Cooperative Work Program (Co-op),³¹ which places eligible students in work at an approved business or industry. Placement involves the participation of the student, the instructor, the director and the company. Co-op is an integral part to the learning experience at the technology centers and provides valuable experience as well as a salary commensurate with entry-level employment.

Online programs are also offered by the technology centers in the areas of Computer Information Systems, Drafting/CAD, Business Systems and Allied Health. A Regents Online Degree Program (RODP) is offered to students looking to complete a diploma or take career-enhancing courses. Students complete courses online, but choose affiliation with one of the technology centers. The Regents Online Continuing Education (ROCE) Program is also offered to students. These continuing education courses are designed to meet the demanding schedules of the workforce. Students who participate in ROCE courses are interested in acquiring new skills or improving existing skills for advancement or continuing education units for certification or recertification in a specific field.

After completion of a certificate or degree, the technology centers provide placement services to students, including individual and group counseling sessions, interviewing skills development, job leads and interview scheduling, resume and application package development, letters of recommendation and referral, and part-time job placement assistance during the course of training. Through these services, the technology centers have achieved extremely high graduation and placement rates in many programs.

students with deficient assessment scores are offered free tutoring and remediation. Gas cards are provided for students who organize car pools, free auto repair is offered to students with personal transportation issues, and evening child care is provided. Long-distance learning opportunities are integrated into course content and free computer training and job-related seminars are offered. Placement services for programs successfully place between 90-100 percent of participating students.

FOCUSING ON HIGH-DEMAND CAREER AREAS

Finally, in order to ensure that unemployed workers and others in need of retraining can actually use the skills they gain through education programs, CTE programs have focused attention on high-demand careers in their local areas. By identifying the high-need areas within a state or region, CTE programs can cater to those in need of retraining and specifically address local economic issues at the same time. The ability to meet to local workers' needs makes these programs extremely valuable to the local, state and national economy.

These programs work with local business and industry leaders to identify workforce needs and required employee skills, and then develop training programs for interested workers. These training centers and programs are then able to develop and promote relationships with local employers to better ensure employment upon completion.

High-demand careers have been identified at both the local, state and national level. CTE programs at community colleges and technical centers can fulfill the need for training in these areas. The trainings focus on both lifelong learning opportunities to keep workers' skills relevant and retraining to develop skills and knowledge for unemployed or underemployed workers. Support for CTE programs in high-demand areas is widespread, with state and federal resources being targeted toward this approach. These targeted programs have the opportunity to offer workers the most up-to-date training in the most needed areas.

At the local level, many programs have been developed to address local workforce needs. For example, Connecticut identified aerospace and manufacturing as "pillars" of the state's economy and as a result, established a STEM (science, technology, engineering and math) Careers Partnership and created a virtual STEM Center that works as an entry-point to the One-stop Career Center system for unemployed workers. The partnership includes a number of key industry and training

parties, including community colleges. Through the STEM Center, workers are connected with coaches and mentors to coordinate regional activities and provide individual academic and career counseling.³²

In New York, the adult CTE programs offered through the BOCES centers provide workers training opportunities based on local workforce needs. For example, the Dutchess County BOCES³³ offers a multitude of career training opportunities in Vocational Trades and Information Technology Programs. Areas of training include HVAC, Certified Nursing Assistant and Phlebotomy Technician, among others. The actual programs offered are updated regularly, a result of the rapidly changing local industry.

At a national level, the National Coalition for Certification Centers (NC3) includes geographically dispersed schools, industry leaders and organizations that identify and establish standards and develop certifications to train students, incumbent workers and other educational institutions' instructors in the transportation, aviation and energy sectors. With 10 leadership schools and 20 additional partners, business and education leaders are collaborating to build learning environments that strengthen the connection between current and future workforce training needs and delivery.

Conclusion

The U.S. economy depends on an appropriately skilled workforce. As employment opportunities are phased out and new positions developed, members of the workforce must update their skills to remain relevant. CTE programs have a clear role in providing support and retraining to unemployed and underemployed workers. Successful programs provide opportunities to decrease the unemployment rate and ultimately improve economic conditions by ensuring a skilled, relevant and adaptable workforce to support current and future industries.

Through programs that take into consideration the needs of both employers and students, unemployed and underemployed workers can update and advance skills in high demand areas through short-term and accelerated programs and flexible learning approaches. These CTE programs account for students' other responsibilities, while providing wrap-around services to help ensure complete education and training programs that result in successful placement and career opportunities.

Endnotes

- 1 Rich, Motoko, "Factory Jobs Return, but Employers Find Skills Shortage," *New York Times*, July 1, 2010.
- 2 U.S. Department of Labor, Bureau of Labor Statistics, "Displaced Workers Summary" (Economic News Release), August 26, 2010.
- 3 U.S. Department of Labor, Bureau of Labor Statistics, "Employment Situation" (Economic News Release), December 3, 2010.
- 4 U.S. Department of Labor, Bureau of Labor Statistics, "A Profile of the Working Poor, 2008" (Report 1022), March 2010.
- 5 Sum, Andre, Ishwar Khatiwada and Sheila Palma, "Labor Underutilization Problems of U.S. Workers Across Household Income Groups at the End of the Great Recession: A Truly Great Depression Among the Nation's Low Income Workers Amidst Full Employment Among the Most Affluent" (Boston, MA: Center for Labor Market Studies, Northeastern University, February 2010).
- 6 Sum, Andre, Ishwar Khatiwada and Sheila Palma, "Underemployment Problems in U.S. Labor Markets in 2009: Predicting the Probabilities of Underemployment For Key Age, Gender, Race-Ethnic, Nativity, Educational Attainment, and Occupational Subgroups of U.S. Workers" (Boston, MA: Center for Labor Market Studies, Northeastern University, February 2010).
- 7 U.S. Department of Labor, Bureau of Labor Statistics, "Job Openings and Labor Turnover Summary" (Economic News Release), December 7, 2010.
- 8 Carnevale, Anthony, Nicole Smith and Jeff Strohl, *Help Wanted: Projections of Jobs and Education Requirements Through 2018* (Washington, DC: Georgetown University Center on Education and the Workforce, 2010).
- 9 Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, 2010-11 Edition, www.bls.gov/oco/.
- 10 Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, 2010-11 Edition.
- 11 Jaschik, Scott, "Defining the Enrollment Boom," *Inside Higher Ed*, December 18, 2009.
- 12 Van Noy, Michelle Van, James Jacobs, Suzanne Korey, Thomas Bailey, and Katherine Hughes, *The Landscape of Noncredit Workforce Education: State Policies and Community College Practices* (New York, NY: Community College Research Center, Teachers College, Columbia University, January 2008).
- 13 St. Louis Community College, "Accelerated Job Training," www.stlcc.edu/Workforce_Development/Accelerated_Job_Training/.
- 14 Great Oaks Career Campuses, "Health Professions Academy," www.greatoaks.com/Continuing-education.cfm?subpage=539.
- 15 Miller, Melissa, "New Program Training Dislocated Industrial Workers," *Southeast Missourian*, November 11, 2010.
- 16 Madisonville Community College, "Training and Development," www.madisonville.kctcs.edu/Workforce_Solutions/Training_and_Development.aspx.
- 17 Gateway Technical College, www.gtc.edu/page.asp?q=54.
- 18 Urban, Lauren, "More Midnight College Classes," *The Scientist*, June 3, 2010, www.the-scientist.com/blog/display/57485/.
- 19 Central New Mexico Community College, "Courses," <http://cnm.augusoft.net/index.cfm?fuseaction=1010&catalogid=2>.
- 20 Francis Tuttle Technology Center, www.francistuttle.edu/.
- 21 Center for Community College Student Engagement, *The Heart of Student Success: Teaching, Learning, and College Completion, 2010 CCCSE Findings* (Austin, TX: The University of Texas at Austin, Community College Leadership Program, 2010), p. 15.
- 22 Washington State Board for Community & Technical Colleges, "Worker Retraining Program: 2009-2010 Local Plan Guidelines," www.sbctc.ctc.edu/college/workforce/09_10_wrt_guidelines.pdf.
- 23 Washington State Employment Security, "Qualifying Occupations," www.wilma.org/wdclists/.
- 24 Big Bend Community College, "Worker Retraining Program," <http://admissions.bigbend.edu/FinAid/Pages/WorkerRetraining.aspx>.
- 25 League for Innovation in the Community College, "Career Pathways Training Team: Dislocated Workers Program, Portland Community College," www.league.org/leaguetlc/express/inno308.htm.
- 26 Westchester Community College, "Displaced Homemaker Retraining," www.sunywcc.edu/continuing_ed/disp_home/displaced_home.htm.
- 27 U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, "Fast Facts," <http://nces.ed.gov/fastfacts/display.asp?id=98>.
- 28 Joliet Junior College, "Plus 50," www.jjc.edu/continuing-education/workforce-development/Pages/mature-workforce.aspx.
- 29 Lorain County JVS, "Adult Career Center," www.lcjvs.com/adult/.
- 30 Tennessee Board of Regents, "Tennessee Technology Centers," www.tbr.state.tn.us/schools/default.aspx?id=2654.
- 31 Tennessee Technology Center at Nashville, "Cooperative Work Program," www.ttcnashville.edu/pdf/ttcnco-opworkprogram.pdf.
- 32 U.S. Department of Labor, Employment and Training Administration, "STEM Opportunities in the Workforce System Initiative: Connecticut STEM Careers Partnership," www.doleta.gov/BRG/pdf/STEM_Eastern_CT.pdf.
- 33 Dutchess BOCES, "Adult Career and Technical Education," www.dcbores.org/adults.

PHOTO COURTESY OF GATEWAY TECHNICAL COLLEGE IN WISCONSIN.
A STUDENT PARTICIPATES IN THE MACHINE REPAIR BOOT CAMP.



Association for Career and Technical Education

1410 King Street, Alexandria, VA 22314

800-826-9972 703-683-3111

Educate. Advocate. Lead.

www.acteonline.org